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Virginia's Wildlife and Related Natural Resources
and to the Betterment of
Outdoor Recreation in Virginia**

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SEPTEMBER

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Cause for Celebration

"SPORTS-HUNTING is neither sport nor hunting. Given the minimal habitat remaining for wildlife, coupled with modern weapons, the slaughter is a base activity comparable to shooting fish in a barrel."

"Hunting is not a true sport, for the simple reason that there is nothing sporting about shooting a defenseless wild animal with a high powered rifle."

That is what some people are saying about hunters these days, but in many respects these critics are like some of today's youth who criticize the work-ethic of their parents while wallowing in the luxuries it provides. Without hunters these groups might well have few animals left upon which to lavish their compassion.

President Nixon, the Congress of the United States, Governor Holton, and a few million others around the country think that hunters and fishermen are to be congratulated on their efforts and have thus set aside the fourth Saturday of September as National Hunting and Fishing Day to recognize their contributions. It has all been said before, but let's look for a moment at the record of those whom some would condemn as butchers and ogres.

Hunters and fishermen, not bureaucrats, dreamed up the idea of state hunting and fishing licenses years ago and even today most sportsmen buy their licenses willingly. This generates nearly \$200,000,000 annually to finance state conservation programs and is the major source of revenue for most state wildlife agencies. Additionally, sportsmen persuaded Congress to levy federal excise taxes on their equipment and channel this money into state wildlife programs also, producing another 50 million per year to be returned to the states for research, habitat acquisition, development, and hunter safety training. By popular demand this tax has been amended recently to include pistols and archery equipment. We are still awaiting the day when motorists stand up en masse and demand that their autos be taxed to fight air pollution or when homeowners demand that their sewer taxes be increased to help clean up our rivers.

Nationally, hunters alone have paid over 2.2 billion into conservation efforts in the past 50 years. They buy some \$8,000,000 worth of federal duck stamps each year to support federal refuges and have contributed \$22,000,000 to Ducks Unlimited for waterfowl nesting projects in Canada. Fishermen have been in the forefront for years fighting to clean up our polluted waters. Hunters and fishermen represent only 23.4% of the population of the United States, but they have provided most of the money and enthusiasm that has brought our wildlife populations from the dismal conditions of near extinction that existed at the turn of the century to the levels we enjoy today.

Sportsmen in Virginia have contributed around 65 million to finance state wildlife programs since the Game Commission was founded in 1916, and excise taxes have generated over \$20 million for research, habitat acquisition and improvement. As a Virginia sportsman you have a record to be proud of, so why not get one or more of the organizations to which you belong to sponsor a National Hunting and Fishing Day open house September 22 to let the other 76.6% of our population know what it is all about. For help contact the National Shooting Sports Foundation, 1075 Post Road, Riverside, Conn. 06878, or the Virginia Game Commission, or both!—H.L.G.

LETTERS

Songbird Slaughter Dilemma

I am sure you have already read this article in your newspaper [two Roanoke youths, ages 14 and 15, suspected of killing cardinals, goldfinches and mockingbirds, not to be prosecuted but put on informal probation]. The shooting of songbirds by kids with BB guns goes on all the time, especially during the summer. Their parents and even the U. S. Attorney in the above case seem to deal rather lightly with this violation of the Migratory Bird Treaty Act. Perhaps you can use your influence as editor of *Virginia Wildlife* to inform the public of the seriousness of this federal crime. Ignorance of the law is no excuse.

Boiling Mad
Madison Heights

Virtually all birds except those considered resident game species are granted federal protection under the Migratory Bird Treaty Act. This includes all songbirds, hawks and owls, ducks and geese, water birds and, most recently, crows. Basically, the only time a wild bird may be shot is during an authorized season on that species. Shooting such birds out of season or killing birds on which there is no season is a federal crime punishable by fines up to \$500 and as much as six months imprisonment.—Ed.

Free Trout?

WHILE stationed at Little Rock AFB in Arkansas, I enjoyed some of the best trout fishing I have ever seen, on the Little Red River just north of the base. A little farther north is the White River, also stocked by the State and offering even better trout fishing. There was a year-round season, no trout stamp requirement, and fishing licenses cost \$3.50, the same as here. Why can't we have a system like that in Virginia.

Tom Stainback
Newport News

First, the trout stocked in Arkansas are provided free by the Federal Government and don't require any fishing license revenue to produce. Only about 1/3 of the approximately 1,300,000 trout stocked annually in Virginia come from federal hatcheries. We have approximately 165,000 trout fishermen and stock over 600 miles of trout streams. Most nearby states to the west and south of us are not involved with anywhere near that volume. Over much of our trout stocking area there aren't the warmwater fishing options found in states where trout are stocked primarily in the tailwaters of large reservoirs. Also we have 679,696 licensed resident anglers in Virginia compared to only 413,349 in Arkansas (1971 statistics). A growing number of Virginians would like to see us provide better trout fishing for fewer people, but we haven't yet come up with a formula for doing this.—Ed.



Why Fish?

By SHARON SAARI

"Motivations for Fishing." Another report, "What Fishermen Look for in a Fishing Experience," was written by Moeller and Engelken from New York. Though these are "northern" results, the summaries apply to Virginia anglers.

The Rapidan River is a Virginia "fish for fun" river, where catch is returned to the river. The pounds and numbers of fish brought home are *not* most important to the anglers of the United States. In a survey of 4000 Ohio fishermen, a majority of them enjoyed the trip as much if they caught no fish.

Size and amount of fish caught are not important to older, more experienced fishermen. Less experienced "green" anglers find size of fish, "the big one," is more important. Younger boys with a pole consider number of fish caught to be a measure of success. But these factors are relatively minor to the average fisherman.

The 100 New York anglers interviewed provided the view of this "average" fisherman. Does he fit you? This author, a female, says, "Sorry ladies, the average fisherman is a man." However, we woman fisher-persons are on the increase. The "average" angler is a fortyish male, who has a poor "fisherman's widow" at home, wondering where in the freezer she'll put *more* fish! Her husband has been fishing for 25 years, so she has accepted his other passion with a sigh. This typical angler has grown up in a rural setting and now is employed at a "blue collar" job.

"Whoa," you say. "I know Charlie; he's a young Washington executive, who fishes the Potomac, off Theodore Roosevelt Island, every night! And he wears a tie, white shirt and has an urban background." The earlier description is only a composite sketch.

The "average" comes from a great number of fishermen interviewed. But more important than his statistics . . . what is he looking for in a fishing experience? The greatest factor is water quality. Most fishermen, and fish, require clean, unpolluted water, not muddy, smelly, lined-with-beer cans waterways. This requirement is even more important to the old, experienced angler. He knows that where the fish are, is where the water is the cleanest. Young Charlie may soon give up on the Potomac.

Natural beauty and privacy are the next most highly rated reasons for fishing among anglers interviewed. The surrounding environment, scenic qualities are very important. A fishing man wants to be alone with nature, surrounded by quiet, trees, and wildlife. He avoids "developed" areas, where he will run into more of his own species. A trout fisherman *least* likes to see others. He prefers natural banks to channelized or cement structures. Most fishermen simply enjoy the great outdoors

FISHING has been defined jokingly as one jerk waiting on the end of a line for another jerk. Why would anybody stand all day in the rain, waiting for a jerk on a line? Why do people drive hundreds of miles for a weekend of fishing? Why does a man leave the family and comforts of home to spend a week's vacation in a trout stream to return empty handed? Only a "jerk" would do this? No, only a devoted fisherman.

"Why do *you* fish?" A thousand anglers will give a thousand answers.

"To get away from the wife."

"I just do it for fun."

"To get that big daddy who lives under that rock, who's been outsmartin' me for years."

"I need to be alone in the woods sometimes."

" 'cause of the birds, the quiet, the peace . . . not the fish."

But more recently, these answers have been quantified and analyzed. If schools such as Virginia Polytechnic Institute and government agencies like the Cooperative Fisheries Unit, also at Blacksburg, are to train "fisheries biologists," more needs to be known about the motivations of fishermen. The psychological needs of these recreation seekers must be understood. What are the most important aspects of a fishing trip to the angler? The Virginia Commission of Game and Inland Fisheries and the U.S. Bureau of Sport Fisheries and Wildlife both manage fishing areas in Virginia. Yet most "management" is directed to facilities and stocking programs, not to the needs of the fishermen.

Two comprehensive studies on the motivations of fishermen have been recently published in scientific journals. Knopf, Driver, and Bassett presented results of a Michigan study at the Thirty-Eighth North American Wildlife and Natural Resources Conference on

Ms. Saari, who has degrees and training in wildlife and public relations, is now employed by the Piedmont Environmental Council in Warrenton, Virginia

and fish to get "away from it all." It is their escape back to the real, untroubled world of a natural ecosystem.

After the angler has satisfied himself with clean water and an unspoiled setting, he then gets more "practical." Next in importance, he ranks size and number of fish, plus the comforts of good weather. Those who have borne an all-day drizzle, to get a few small nibbles, will realize how strong these factors weigh. Size of fish does, however, outrank numbers. You'd rather get a five pounder any day than a whole stringer of small sunfish.

Least important to the average angler are access and facilities. These two do rate higher, however, among older, retired fishermen, for obvious reasons. Yet, what is the first thing a government fish management agency does when it opens a new fishing area? Usually it puts in a boat launch, garbage cans and other facilities. The expensive "improvements" are not a requirement of a typical man who fishes, only his father. Access is only important when you don't have it. Fortunately, in Virginia, "No Fishing" is not a common sign.

The summary of fishing desires can be further broken down. In interviewing those who would or would not pay a fee for access, it was found that size was a factor. Anglers who would not pay to fish felt the size of the catch was more important than did those who were willing to pay a fee. An urban dweller will accept a "fee" more willingly than someone with a rural background. Yet, both urban and rural people rate factors almost equally. Weather is more important to those whose leisure time is rather limited. The qualities listed as most significant in a one-day fishing trip were not much different for both lake and stream fishermen. The study concludes, "the concept of fishery management should be broadened to incorporate environmental management, if a quality fishing experience is to be provided" (Moeller and Engelken).

Knopf, Driver, and Bassett agree, "we feel that the behavioral approach has been employed too infrequently as a basis for decisions in wildlife and fishery resource management." These researchers list four strong motivations for fishing. The need to escape, even if only temporarily, from stressful conditions of work and domestic problems is extremely important. For a while at least, a bass replaces a low salary; a good struggle

bringing in a fish replaces a nagging wife. The closer a fisherman lives to an urban area, with greater human stresses, the more he needs to escape. A poor neighborhood, crowded and "poorly kept up," increases the importance of recreation for temporary escape.

The opportunity to achieve has also been found to be an important motive for fishing. It is basically a non-competitive sport. More "achievers" are found competing in golf or tennis, against other men. Lower income fishermen find even more fulfilling achievement needs in fishing. A man who is frustrated in his job and needs positive reinforcement may find it in fishing. He can bring home a largemouth bass and be a hero to his friends and family.

A third need fulfilled by fishing is that of exploration. With pole in hand, a man can seek out new environments and exciting experiences. How many times have you taken a map in hand, tackle box under arm, and headed for a new spot? Or you're canoeing and you set out to explore a new river for fishing. The need to experience natural surroundings, sights, sounds, and smells is highest among fishermen when compared to other recreationists.

Man is a "social beast," but fishermen are not. In fact, most fishermen have a very low "affiliation need," psychologist jargon for, fishermen like to be alone and resent others sharing their creek. Most fishermen do not like canoeists. Their "hi, how's the fishing today?" is not appreciated. Less loved is the canoeist who rams a logjam and disturbs cover. The fisherman who most appreciates the natural surroundings has a desire to limit canoe users on *his* river. The wilderness-user satisfaction decreases with more and more social encounters. The more popular Virginia rivers, especially near Washington D.C., Richmond, and Roanoke, may have to be "zoned" in the future. One section of a river may be reserved for fishermen, another for canoeists. Some lakes will have to be set aside for fishing, with no water-skiers allowed.

Sure, you know why you fish, but does the man who "manages" your fishing area? The biologists are busy stocking . . . species, size, limit, season. Do the biologists really know what *you* want? Would you prefer a wild experience for one native trout, or to follow a hatchery truck dumping brooks, rainbows, and browns? Are our fishery biologists being trained to meet your needs? Do they even know what these needs are? There is a need for a new school of fishery-psychologists, not biologists. The human needs and motivations of fishermen can all be met in Virginia's beautiful streams. Will they in the year 2000?

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Photo by Mrs. Harrison O'Conner



VIRGINIA IS FOR DOVERS

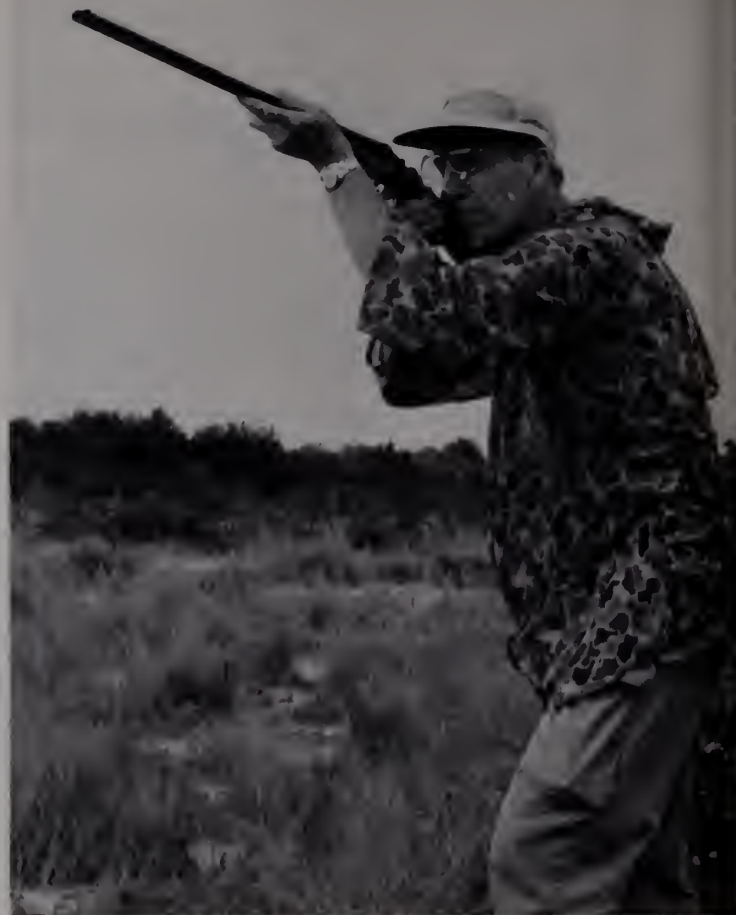
By SONNY FENTRESS
Virginia Beach

CHRISTMAS comes only once a year, unless you're a dove hunter. Then it might come twice. Dove bangers scurry around the night before making preparation for the opening day, taking out shotguns, counting shells, digging up gunning bags, locating hunting stools, camouflage outfits or green, army fatigues to blend in with the corn stalks or hedgerows. And if you're a dyed-in-the-wool dove shooter, you might have dove decoys and caller.

My season was already spiced up and the night before visions that danced in my head were not of sugar-plums but dove flocks. Sonny Gregory, conservation officer at Oceana Naval Air Station, invited me down to shoot at what he calls the "V.I.P." field.

"State Game Biologist Fairfax Settle asked me to plant this new type of proso millet in our sandy soil on the base," said Gregory, "and report back the results of our crop. Well, the millet did great growing in the sandy soil, and it has attracted a bumper crop of doves."

I was glad for the success of the millet experiment, but needless to say I was delighted at the news of the



Army General Frank Norris cracks down on an incoming dove. It was a hot day, both the weather and the shooting. Notice feathers on General's face.

doves. The base conservation officer said, "We'll be shooting with high brass today." I first interpreted this to mean that we were to shoot with power-packed shotgun shells.

As we hit the millet field to take our places of concealment, Admiral Roy Johnson, Army General Frank Norris, Admiral B. J. Semmes, and Captain John Lavra, base executive officer, joined our shooting party.

By this time, Gregory had pointed out the four essentials that contributed to the good dove attraction, food—a well planted millet field, water—a man-made pond at the foot of the hill, roost—a large stand of pines nestled in the background and, last, gravel.

Doves are grain and seed eaters, and, without teeth, they need gravel to grind up their food. A borrow-pit on the other side of the highway provided this tidbit.

As the noon hour arrived, I walked side by side with Navy Chaplain Vern Berg, who later joined our group, and this was to be his first hunt since returning from Vietnam. A flock of doves flared from the nearby pine thicket. The man with the sermon delivery threw the shotgun to his shoulder and one gray jetster crumpled under the impact of the load of shot. It was as if the bird flew into an invisible brick wall.

A puff of feathers floated to earth as the shotgun-toting preacher stooped to recover his downed wing-



Admiral B. J. Semmes retrieves his 12th, completing his limit. Notice dove seat.

ster. The crackshot chaplain extended a hand and offered it in a good luck handshake for the opening day of dove season.

He grinned as he gave a firm shake, and I grinned back with envy and admiration. It was just the beginning of a beautiful day for the hawks.

Later that day I felt a little embarrassed that a chaplain had gunned his limit before an outdoor writer. But I soon forgot this as I relaxed shooting next to an army general.

I favored my automatic 16 and thought General Norris did also by the reports of rapid shotgun burst. But, upon closer observation, I spied the general as he broke open his "automatic" and rammed home two shells.

Soon I moved in closer and saw the general had stuck extra rounds of shells in between his fingers and loaded and fired his double like an automatic.

The mourning dove is by far the most popular of all upland game birds. Its enormous contributions to our sport of hunting were made graphic in surveys conducted by Winchester. They show that in 30 states where it is hunted, the dove take exceeds that of rabbits, quail and ducks, and has long been the number one consumer of ammunition in America. And at the same time the dove population is increasing.

This increase is due to several factors, good game management being one of them. For another, unlike most wild game, the dove thrives on civilization.

Being a seed eater it has benefited from the disappearing forests and the intense cultivation of the land. Also, the mourning dove is said to nest several times a year, as many as six times in a warm climate. Therefore, there is no such thing as an unfavorable nesting season wiping out an entire year's crop.



When checking a field for doves, this sight is a sure sign that doves are available.

The gray top-coated jetster with the pale pink bib is by no means a sissy-bird and quite capable of surviving the hunter's gun. Doves appear to get a running start before zooming down a guarded corn field or millet patch. They have the speed of a Phantom Jet combined with the broken-field running ability of a Gale Sayers.

According to game biologists, only 15 percent of the total dove population become fatalities of the gunners' shots. Mother Nature, including weather, predators and disease, eventually does in the other 85 percent.

Like most dove busters, you learn early that concealment is at least 50 percent of a successful dove shoot. The other 50 percent is putting the gun on the erratic target. And anybody that has ever gunned doves knows they dart, zip, flit, dip, swerve, slide, zoom and are famous for what I call the dipsy-doodle dodge. If you're ever in front of a dove coming head-on and he spies you make your move, you'll find yourself drawing figure 8's with the business end of your gun barrel. Most shots on an alerted dove usually end up punching air holes in the sky.

Dove shooting can be fast and furious, simply because mourning doves are more prolific than any other game birds. It is estimated that the annual nation-wide harvest pushes over 35,000,000. Right here one can readily see how the outdoorsman gives the economy a shot in the arm. The national average on bagging doves is five out of a box of 25 shells. So the above figure for birds harvested represents 175,000,000 rounds fired. The cheapest field loads run about eight cents apiece.

The day at the V.I.P. field ended up with the hawks having a great day. General Norris came out on top for the Army by getting an early limit. The two admirals rounded out with limits also, but Captain Lavra made one of the most difficult shots. He banged down a trio of doves with two shots.



MUZZLE LOADERS GET THEIR BIG CHANCE

By GARY BRUMFIELD
Williamsburg

VIRGINIA has become the 18th state to offer a special deer hunt in which muzzle loaders are the only firearms allowed. The Game Commission received numerous letters requesting such a season and petitions with nearly a thousand signatures were presented at the April meeting in Richmond. After studying the results of muzzle-loading hunting in other states, the Commission voted for a trial primitive weapons season in Virginia.

Interest in black powder shooting and hunting has increased tremendously in the last few years and several states now offer over twenty days of hunting for those willing to leave their cartridge guns at home. Over two thousand hunters have participated in some southern states, and more importantly this extra hunting has been provided without an appreciable increase in the game harvest.

With the number of hunters steadily increasing and the available hunting lands decreasing, the emphasis of game management has turned toward providing the highest quality hunting rather than the largest kill. A muzzle-loader season is a step in that direction, and this fall several hundred Virginians will enjoy a truly different hunting experience.

The six day, bucks only muzzle-loader hunt is limited, for this year, to three State-owned wildlife management areas. The Clinch Mountain Wildlife Management Area north of Saltville has 18,500 acres, most of which are above the 3,000 foot elevation mark. The Gathright Area in Bath County has 18,500 somewhat less rugged acres but the area's southern tip is closed due to the construction of the long disputed dam on the Jackson River. Largest of the three is the Goshen-Little

North Mountain Area with its 32,200 acres stretching along the ridge from Route 60 west of Lexington to Route 252 west of Staunton.

Muzzle loaders will be hunting along with archers during the last week of bow season, November 9th thru 15th. Combined muzzle-loader and archery seasons have been adopted in seven other states and have been successful in every case because of the two groups' similar attitudes and hunting techniques. These combined seasons are usually designated as primitive weapons seasons.

The firearms used must be at least .45 caliber, and the single ball or conical bullet must be loaded from the muzzle. The powder charge has to be at least 50 grains (Avoir) of black powder. Rifled and smoothbore weapons are both legal, but muzzle-loaded pistols are not allowed.

A question that bothers many cartridge gun hunters is, "Why would anyone waste their time hunting with a weapon that became obsolete a century ago?" A few are too polite to ask, and others regard muzzle-loader hunting as a form of incurable insanity. This primitive hunt gives some an answer of their own when they try muzzle loading for the first time and like it.

A large part of the appeal of hunting with a flintlock or percussion rifle is in the added challenge of restricting yourself to a single shot with a relatively temperamental weapon which can give the deer an unexpected advantage over the hunter. Another appeal is the desire to experience a hunting situation similar to that faced by the men who settled this land two hundred years ago. Either of these could be reason enough to give muzzle loading a try, and most hunters have both the desire for a challenge and an interest in their heritage.

Muzzle-loaded firearms have been used for hunting in Virginia for over three hundred years. In the 17th and 18th centuries hunting provided meat for explorers and settler families. At the same time deer skins were a

major export item, and the quest for these skins led the first white men across the mountains into Kentucky. The legendary use of the rifle in that western county of Virginia led to the practice of calling all long rifles "Kentucky Rifles."

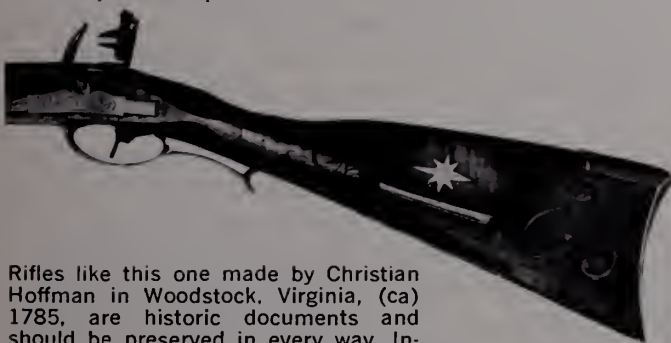
By the end of the first quarter of the 19th century most of the big game in Virginia had been killed out or pushed westward. Muzzle-loading rifles evolved into the small-bored squirrel rifle form. West of the Mississippi, hunters continued to use large caliber plains rifles.

Even after the production of metallic cartridge firearms, muzzle loaders were often used for hunting because they were readily available and economical to use. Many modern-day hunters trace their interest in muzzle loaders to true stories their fathers or grandfathers told about hunting with the family long rifle.

In some cases the discovery of an antique rifle gathering dust in the attic has caused interest both in learning about the history of muzzle loaders and in shooting. These old rifles should not be used for hunting, even though they may be in safe firing condition, because they represent a segment of history and can never be replaced if damaged or destroyed in a hunting accident. Even target shooting will eventually ruin an original rifle. The present owner of an antique has a responsibility to future generations for its preservation. Buy a new muzzle loader to shoot and leave your original at home.

This brings us to the problem of selecting one of the new muzzle loaders now available in most gun shops. As in the selection of any hunting gun there will be differences of opinion among even the most experienced, but there are certain guidelines which most will agree upon.

Virginia's new season allows either rifles or smoothbores to be used. Rifling was developed in the 15th century and was used for deer hunting in central Europe before settlement began in America. Rifles spread to this country because they were well suited for hunting in the woods and by the third quarter of the 18th century they were used for most big-game hunting because accuracy was important.



Rifles like this one made by Christian Hoffman in Woodstock, Virginia, (ca) 1785, are historic documents and should be preserved in every way. Inspired by his study of original rifles the owner of this rifle, Wallace Gusler of Williamsburg, is now writing a book on Virginia gunsmiths.

W. Gusler photo



This three-shot group fired at 50 yards measures under two inches, which is good accuracy for a hunting rifle.

Smoothbore sporting arms remained popular for small game and waterfowl hunting. A fowling piece, as muzzle-loading shotguns were called, can be loaded with a single patched ball but the accuracy will be considerably below that of a rifle.

Another type of smoothbore is the musket. Some people mistakenly call all muzzle loaders muskets or "musket loaders." A musket is a strictly military weapon designed for tactics calling for rapid fire rather than accurate fire. A smoothbore musket can be loaded in one-half the time needed for loading a rifle, but has only one-fourth the range. They are not hunting guns.

If you are shopping for a muzzle-loading firearm for hunting deer, a rifle is the obvious choice, as it was years ago.

A more difficult decision is choosing either a flintlock or percussion rifle. Advocates of either will often argue that their rifle is the only one worth considering. A wise choice can be made only by one who is familiar with both systems.

The flintlock is, of course, the older of the two ignition systems and it relies on sparks created when a moving flint strikes the steel frizzen to fire the priming powder. This priming charge is located in the pan, and the flash of its explosion travels through the touch hole to ignite the main charge in the barrel.

The percussion or caplock system replaced the flintlock after 1820. A percussion depends upon an explosive compound in a brass cap which detonates when struck by the hammer. The cap is struck while on a hollow anvil called a nipple, and flame travels down this tube into the powder charge.

It may appear obvious that since the percussion replaced the flintlock it is the superior system. Indeed the caplock was an improvement when the standards of judgment were those of a man struggling to feed and protect his family. Today hunting with any muzzle loader is done as sport and for many the appeal of the flintlock is strong enough to outweigh any slight functional disadvantage.

A percussion is a bit easier to learn to shoot because the tendency to flinch is not as great as with a flintlock. The flash of priming powder will not burn a flintlock shooter, but it will startle a novice.



A new flintlock rifle is shown with a hunter's shooting equipment, including a powder horn, bullet bag, and powder measure. The bullet mould casts lead balls the proper size for this rifle.

Since a percussion lock has fewer parts and will function with weak springs and unhardened parts, a serviceable caplock can be made more cheaply than an equally reliable flintlock. Very few factory-produced flintlocks are of good quality. A hunter looking for the lowest priced serviceable muzzle loader should buy a good caplock. If a hunter wants to spend as much as the cost of a good modern rifle, he can purchase a serviceable flintlock.

The priming power in a flintlock is more exposed to moisture than the cap and powder in a percussion. However, this feature can become an advantage for the flintlock. The pan of priming powder can easily be inspected to determine its condition, whereas moisture in a percussion nipple goes undetected until firing is attempted.

Most shooters claim that percussions are faster firing, i.e., have a shorter lock time than flintlocks. Recent tests published in *Black Powder Digest* give the time from the start of the hammer fall until the ball leaves the muzzle as .022 seconds for an underhammer caplock and .055 seconds for a flintlock. Three hundredths of a second should not have much bearing in the selection of a hunting rifle.

When all these factors are considered and all local opinions heard, the selection of either a flintlock or percussion may well depend on the period of history the hunter finds most interesting. One new black powder shooter in Christiansburg said, after selecting a flintlock rifle, "If I'm going to do this I might as well go all the way."

Whichever rifle is chosen it will have to be at least .45 caliber to be legal. Muzzle-loading hunting rifles are usually designed to fire a cloth-patched round ball, the diameter of which must be large enough to give a bullet weight comparable to that of a modern deer-rifle bullet. A .45 caliber lead ball weighs about 136 grains, and anything lighter would be too small. A .50 caliber ball weighing 187 grains is good for hunting and offers better wind-bucking ability on the target range.

If a hollow-based conical bullet is used, it can be selected to provide the desired bullet weight in any caliber. However, some slow-twist rifling will stabilize only the shorter conicals. These are highly recommended for any rifle under .50 caliber. Conicals should also be used in most Civil War period reproductions as they are designed for minie-ball use. These heavy, slow bullets should perform very well in brushy country.

The caliber of the rifle chosen will be a guide in deciding how much powder to use. At least 50 grains of black powder must be used. Most hunters like to work up to the heaviest load their rifle will safely handle without losing accuracy.

For a hunting load, in a round ball rifle, try one and one-half grains of FFG black powder for each caliber of the bore. The load for a .50 caliber would therefore be 75 grains of black powder. This load should be considered a light hunting load, and it is midway between a target load of one grain per caliber and a heavy hunting load of two grains per caliber.

The powder charge for a conical bullet depends on the weight and design of the bullet, and literature with the mould or the experiences of another shooter with the same bullet would be the best guide.

There are many books and magazine articles on shooting a muzzle loader and these will provide detailed information beyond the scope of this article. A more enjoyable way to learn is to find people that shoot muzzle loaders and ask them to help you get started.

Learning to shoot a muzzle loader well under hunting conditions is not easy. Even experienced target shooters can become all thumbs when they try loading their rifle in the woods for the first time. After the zero and accuracy of a hunting rifle have been established, the shooting should be done from typical hunting positions, loading done from the bag, and horn worn while hunting.

Master your rifle before season, and one shot will be enough. Go into the woods unprepared and you will probably come out empty handed, feeling a bit foolish.

As you set out to enjoy this new muzzle-loading deer hunt, remember that the results of this year's season will be a major factor in deciding the fate of muzzle loading in Virginia. Several states boast of their muzzle loaders as among the best sportsmen in the state. Virginia can do the same if we do our part to make this season a success.

A NEW BREED OF WIDOWS IN THE SAME OLD WEEDS

By BOBBYE FENTRESS
Virginia Beach

SURE, we know there are all kinds of widows. Let's see . . . there are grass widows, black widows, fishermen's widows and golfers' widows, just to name a few.

But, sisters-under-the-skin, we know the worst kind of widow you can be, don't we? All together now . . . **A HUNTER'S WIDOW!**

Do we hear some argument? Then let us give you a few "for instances" merely to make our point.

Summer slips by. Too fast. September arrives. Snappy breeze starts to blow lawn full of leaves from trees.

Husband no longer wears lackadaisical face that threatens oncoming sunstroke if thermometer climbs one notch above 80 degrees. Suddenly, Big Daddy full of vim, vigor and much vitality.

Riding down country road. Notice car not aiming as it should. Drifts past center line then heads oh too close to ditch on other side.

Wife too tense to speak. Glances at you-know-who, only to see back of head. "Lookit that! Lookit that! At least 25 of 'um just flew up from that field!" he gasps.

"Car coming," she croaks as husband returns car to right side of road lickity-split. Promises of no more looking for doves in fields extracted from driver.

"Pow! Pow! Pow! I'll be back for you boys in a few days!" Driver not looking in fields. Man of his word. This time, he adjusts imaginary gun sight on five or six little black specks diving around up in the sky.

No problem, hmm? Stick around.

"No more dove hunting," husband announces one afternoon. Wife manages tender smile as he places gun on rack in den. Doesn't even yell as stray feathers settle on furniture and rug when hunter clumps through rooms.

Silly widow. Should know by now this only means time to start building "very last duck blind" in time for duck season.

"Dressing like that to go to paint store?" wife asks innocently, clutching dog-eared sheet of paint-samples in hot little hand. "Pound poles," he mumbles over shoulder while consulting puckered-looking list she washed in pocket of his work clothes.

"Pound poles just to paint trim on house?" she squawks.

"Duck blind," he growls, noticing wife's knuckles turning white on crumpled-up paint list.

Next weekend comes. He departs with many long boards. "Soon over," she whispers to self. "Patience," she adds.

Another weekend—hubby disappears with other hunters, all carrying axes, hatchets and saws. "To bush blind," she overhears one Paul Bunyan say.

One time Girl Scout, she knows when to "be prepared." Pills and cream await return of big white hunter.

"Can't get poison ivy or weed rash when completely covered with clothes!" hunter-builder shouts indignantly, glaring at array of preparations in readiness.

Not much sleep for next few nights. Constant motion of shaking bed while weed rash victim scratches all night, makes slumber most evasive.

All signals on "Go" for duck-hunting season. Partner's closet suddenly packed full. Check to find winter supplies installed: two pairs insulated underwear, foul-weather gear, camouflage suit, hunting jacket, pants and many thick, itchy, wool shirts. All good suits squashed at end of closet.

Magazine racks and bookshelves brim over with hunting info. Husband's brainwashing complete having read from *The Power of Positive Hunting* to *Valley of the Ducks*.

Police whistle used to summon children replaced by duck and goose callers. (Doctor guarantees headaches will disappear when hunting season ends.)

Rusty water all month. Water-conditioner man can't get to tanks in garage to make exchange. Fifty-four duck, goose and swan decoys blocking passageway.

Opening day arrives. (How come called "day" when still pitch-black outside?) Hunter-husband creeps and tiptoes until successful in waking entire household.

Wife get noble idea. Father is rat-fink so mother will do extra good deed for deserted family and take mind off feathered friends.

Arrive at movies. Buy enough popcorn and candy to last until show starts. Already feel better.

Lights out—picture flashes on wide screen.

Ha! Ha! So funny, mother could cry.

Main character of three-hour kiddie special? Who else? Donald Duck.



HUNT FOR THE MAST

By C. H. SHAFFER

Game Management Field Coordinator

IN order to be a successful sportsman it is helpful to know a great deal about the game species you are attempting to hunt. It is essential to know its preferred range, its daily life habits, and its peculiarities. Above all, one needs to know what the game eats, especially during the fall and winter seasons when hunting seasons are open. Wildlife usually can be found not too far from their source of food.

Most hunters, through past experiences, have a general knowledge of wildlife food preferences and hunt their favorite areas accordingly. One doesn't need a PhD degree to know that squirrels eat hickory nuts, that deer and turkeys like acorns, that grouse frequent grape thickets, or that quail really go for lespedezas and Beggar's-lice.

Sportsmen miss a good opportunity for self-education if they do not spend some time in the woods and fields during periods of tracking snows. Then the evidence of food preferences are clear-cut and readily determined. Hunters should learn to really appreciate the value of old house places with their variety of food, the grape thickets, the spring seeps and jungles of Japanese honeysuckle. A day in the snow will soon reveal the preference of our birds and animals for the warmer southern and eastern slopes of ridges and mountains where snow melts first, thus making more food obtainable.

The real acid test for wildlife, and sportsman as well, occurs in a year like 1972 when, through a series of weather quirks, there were practically none of the usual wildlife foods available. Little mast—acorns, hickories, beech or grapes—were to be found in the mountains and ridges during the hunting season. An unusually late frost had seemingly eradicated most of the well-known wildlife foods from many areas of Virginia.

One could hunt all day in the usually good turkey and grouse ranges and not be able to locate a cup of food on which most game birds could survive. Naturally under these conditions there was little sign of wildlife in many areas. However, the more observant and persistent hunters were able to locate flocks of turkeys and some grouse. They searched the ridges, the valleys; different elevations in various localities. They were rewarded by finding wildlife where the game had changed their range. Some small pockets of acorns or grapes were located by the systematic searching.

The more one hunts or studies wildlife the more respect one gains for the remarkable resourcefulness and adaptability of the various species of birds and animals to the conditions in their environment. It

should be obvious that, through the years, wildlife populations have had to withstand all forms of nature's hazards—floods, blizzards, hurricanes, droughts, deep snows, and other catastrophes—in order to survive. One year of mast crop failure will hardly threaten the survival of any species. Starvation is usually not a major problem of wildlife in Virginia.

The majority of sportsmen frequent the woods and fields only during the hunting seasons. Biologists and hunters alike examine crops and stomach contents from birds and animals primarily during this fall and winter period. Thus we obtain a rather distorted or biased picture of the yearly favorite foods of wildlife. For example, the wild turkey and oak woods are always associated together. However, during the spring and summer months a large portion of their diet consists of animal matter (grasshoppers, crickets, worms) along with green grazing material. During the fall and winter if there is a mast failure the mountain and Piedmont turkeys appear to adapt well to dogwood berries, spice bush berries, leaves and berries of Japanese honeysuckle, and the tubers of a mountain plant called spring beauty. Should there be a farm in the turkeys' range, they graze on winter small grain or scavenge unharvested corn.

To further illustrate the adaptability of turkeys and their eating of a great variety of food, we once observed a crop from a Nelson County turkey that contained nothing except salamanders. Many years ago a crop was sent to Richmond from Charlotte County that was bulging with the seed pods of bright tobacco plants. During this past season a turkey gobbler from Botetourt County had slim pickings—he had consumed only a few fronds of Christmas fern.

All species of wildlife adapt well to apparent food shortages and to other changes in their environment. A number of years ago an unusually heavy snowfall occurred in Northern Virginia. Roads were blocked for days and the snow persisted and drifted. There was great concern for the survival of wildlife populations in this region, especially for quail. However, during a two-hour road trip in Prince William County, ten coveys of quail were observed, apparently doing fine. Amazingly most of the coveys were found where the snow had drifted high up into cedar trees. Here the cedar berries along with honeysuckle leaves and berries were readily available. During the following spring, quail were as plentiful as in previous years in this area.

For many years there had been concern for winter food for deer—until it was discovered that the Virginia whitetail consumed a good quantity of dry leaves.

In conclusion—if you want to be able to find wildlife consistently every year, learn what they eat. It will be necessary to discover preferences when natural food is abundant as well as fringe foods when Nature's cupboard appears to be barren.

VIRGINIA WILDLIFE

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

THE COMMISSION OF GAME AND INLAND FISHERIES has set the seasons for migratory birds and waterfowl. During 1973 hunters will be able to take doves from September 15 through November 10, and again from December 22 through January 3, 1974. The bag limit was set at 12 birds per day. Rail hunters will be able to go afield from September 8 through November 16 with a bag limit of 15 clapper and king rail together with 25 sora and Virginia rail. A long season has been established for sea ducks (eider, old-squaw, scoter) which will open on September 1 and run through the end of the waterfowl season. This year's duck hunting will open on November 24 and go through January 12, 1974. This season Virginia has adopted a point system instead of the usual daily bag limit. The hunter's limit is reached when the point value of the last duck taken added to the sum of the point values of the other birds already taken during the day reaches or exceeds 100 points. A leaflet explaining the system and showing the point values of the species common to Virginia is available by contacting the Commission at 4010 W. Broad Street, Richmond, Virginia 23230.

FOREST SERVICE DROPS CAMPGROUND FEES. As a result of new legislation passed by Congress, the Department of Agriculture is dropping its user fees on most family campgrounds and boat launching ramps. The new law says that fees cannot be charged for boat launching unless mechanical or hydraulic equipment is available. Fees will no longer be charged in many day use areas and in campgrounds which do not have flush toilets, showers reasonably available, sanitary disposal stations reasonably available, visitor protection control, access roads, designated tent or trailer spaces, refuse containers and potable water.

ROANOKE PROPOSED AS SCENIC RIVER. The Commission of Game and Inland Fisheries has recommended that the portion of the Roanoke River between Long Island and Brookneal, Virginia, be designated as a Scenic River. The Commission urged that the Commission of Outdoor Recreation recommend to the Governor and the General Assembly that this portion of the Roanoke be classed as a Scenic River because it possesses great natural beauty and all other characteristics prerequisite to candidacy for this status. The river is also a spawning area essential to the well-being of the unique population of landlocked striped bass which is an immensely important recreational resource.

ANGLERS OFF TO A FAST START IN 1973. Reports compiled for the first half of the year show that 823 citation size fish have been caught by anglers in Virginia. This is a gain of almost a hundred fish over the same period last year. Largemouth bass led the list of whoppers as usual, though the number of largemouth citations was down somewhat from last year. Rainbows showed the largest gain during the first half of 1973 with 27 more citations than during the first half of 1972.



OVERLOAD . . . William D. Nugent, physician, hunter, and volunteer Red Cross first aid instructor, shows what can happen when an old gun is fired with too heavy a load. Although hand-loading of shells at home is becoming increasingly popular, Dr. Nugent warns that it is important to fit the powder charge, and the kind of powder used, to the capacity of the gun.

Red Cross photos by
Ted Carland

COURTEOUS AND SMART . . . It is not only good manners, but smart to check with the owner before hunting in his fields. If he knows hunters are there, there is less chance he or his family will stray into the shooting range.



STRAIGHT LINE . . . When two or more hunters are working in an open field, the men should keep abreast in a straight line. If there is a left-handed hunter in the group, his place should be at the right end of the line. His natural tendency is to swing to the right, away from the others. If he were at the other end of the line, his natural swing would be toward the other hunters.



SAFETY—COURTESY

ESSENTIAL INGREDIENTS

By PATRICIA
American Red Cross

WHAT you know about a gun can't hurt you, but what you don't know about a gun can kill you.

"Safe procedures in using guns and other hunting equipment are an absolute necessity in reducing accidents, preventing injury and saving lives," says Robert M. Oswald, National Director of Red Cross Safety Programs. "While the Red Cross does not conduct actual classes in hunting safety techniques, it does cooperate with organizations that do, and it tries to bring useful information on correct gun handling and safe hunting methods to as many Americans as possible."

As with most activities, safe keeping and safe use of guns begins with common sense and courtesy.

When not in use, all guns should always be stored in a sturdy cabinet with a strong lock—the key kept out of the reach of children. Ammunition should also be stored in a locked cabinet, preferably separate from the guns, so that children and others do not have access to it.

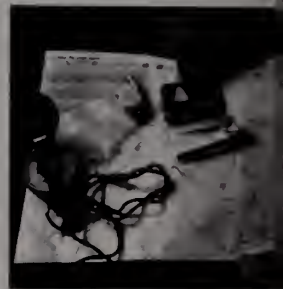
In addition to durable clothing and sturdy, warm boots, a hunter in fields or woods should carry a compass, small flashlight, steel match or matches in a waterproof case, strong knife, sewing kit, bandages and first aid materials, map of the hunting area, and a loud whistle. A whistle can be heard farther than the human voice, and is an important item in any hunter's gear as a call for help.

Always ask a farmer's permission to hunt in his fields so he knows you are there.

When hunting in an open field or in brush, hunters should walk abreast, making sure that one does not get out in front. If one of the hunters is left handed, he should always be placed at the right end of their line, since his tendency is to swing to the right. Hunters working alone in high brush or scrub should make sure that if there is another lone hunter within gunshot, they are aware of each other.

A hunter should make frequent inspections to make certain his gun muzzle is not inadvertently plugged with mud, earth, or weeds. More often than not, if a plugged barrel is fired, it will explode or split.

Whether hunting alone or with others, a hunter should never attempt to climb over a fence with gun in hand. If alone, push the gun—muzzle first—through the fence and lay it down parallel to the fence with the

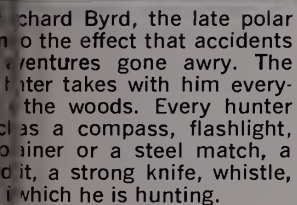


BE PREPARED . . . Adm. explorer, once said some were just poorly planned. Experienced, safety-minded thing he is likely to need should carry essentials: matches in a water-tight simple sewing kit, a first aid kit, and a map of the area.

VIRGINIA WILDLIFE

A. EDGAR
Washington, D.C.

Because of the dangers that accompany the sport, Red Cross officials feel sportsmen should be aware of the hazards involved and know how to minimize them. A great many veteran hunters are already equipped to help themselves and others in case of accident by taking a free Red Cross first aid course offered in their communities. In fact, many enthusiastic hunters serve as volunteer first aid instructors for Red Cross.



EAGLE EYES ... The largest number of accidents come from the hunter's faulty judgment. With an increasing number of sportsmen using bows and arrows, a hunter should be alert to identify a moving object.



ETHICS OF AMERICAN SPORT HUNTING

By TED FEARNOW

*Chairman, Middle Atlantic Environmental Council
Berkeley Springs, West Virginia*

THE conservation movement in America is being confronted with some new, startling attitudes and proposals with respect to wild animal populations. Some of these new schools of thought are vociferous in their opposition to the killing of game animals on the ground that it is "immoral or inhuman." As a strong supporter of the American principle of free speech and freedom to espouse new ideas, I respect the right to hold and present this point of view. But we are going to have to sift the evidence very carefully to establish a sound public position on this matter, for it is of great concern to millions of people.

If custom and usage have any validity in the establishment of moral and legal principles, few of man's actions antedate the taking of animals for food and clothing. Since he emerged from the Stone Age, with crude implements for providing food, man has broadened his interests from mere survival to other more complex motivations. The hunter who goes forth to harvest game animals under the customs and legal conditions now imposed, is confronted with a very different set of mores than his Stone Age ancestors faced. But there is a small and apparently growing segment of the public who take the position that man has no right to kill any creature.

The full implications of protectionism, when carried to this length, are difficult to evaluate. Those of us who were trained for work in renewable natural resource management have had instilled into our consciousness such ecological terms as carrying capacity, productive capacity, and allowable harvest. The non-killing doctrine once unleashed, could have an enormous impact on our civilization, extending to the removal of a key source of protein from man's diet. If it is wrong to kill a wild animal which has keen instincts for escape plus protection afforded by rigidly enforced laws, it must certainly be even more immoral to take the life of a docile, domestic animal; for example, a steer that provides roast beef and steaks for use by man.

Those of us who have grown up in a rural environment—where cattle, sheep and swine are an important element in the economy as well as the diet—have become accustomed to man's traditional dependence upon animals for sustenance. As a small inquisitive boy I



once visited a large abattoir, where sheep, cattle and hogs were processed for the market. I watched, with some disdain, the "Judas goat" as he led a line of sheep down a corridor where they were systematically dispatched and processed as human food. It was not a pretty sight, and to a boy it was one that left a deep imprint. But the job of dispatching was done skillfully. Even on the farm, at "butchering time," it was and is yet the custom to use a rifle as the first step in a quick job of dispatching animals after which they are cleaned and prepared for human use. None of these activities can be labeled "pretty," yet most of us have come to accept them as an essential part of our way of life.

The "inhuman" label that some now apply to sport hunting does suggest that we may need to establish requirements for skill among American sportsmen. For example, the hunter who goes into the field in search of a deer should have enough skill and know enough about his quarry to place a shot where it will do a quick, clean job. Such training could logically be an extension of the present hunter safety program.

Before we deny ourselves and others this type of harvest and sport, we should take a careful look at the alternatives. As a young worker in the field of wildlife management, I witnessed some terrible tragedies resulting from overpopulation of game animals. Northwestern Pennsylvania, about 40 years ago, was the scene of a deer die-off from starvation and winter kill. It was not a pretty thing! The following spring I was one of a group that scoured the woods burying deer carcasses on the watershed of a beautiful stream that provided the water supply for a town of several thousand people. It was not the old and non-productive animals that starved; they could stand on their hind legs and browse the lower limbs of trees that would sustain life. It was the young that perished! When this type of overuse develops in a forest, regeneration

of desirable timber is seriously impaired and sound forest management "goes out of the window."

Man could never have made the progress that has characterized our world had he not learned to utilize the animal populations that convert plant life into protein that is nutritionally important and readily available. At this stage of man's development, with population explosions threatening, it is hardly a time to be thinking about eliminating a significant item of food. Perhaps when man has brought his own numbers under control and the demand for food begins to lessen he can devote thought to such matters.

Most Americans are now several generations removed from the land. As city dwellers they have acquired idealistic but sometimes impractical attitudes toward renewable natural resources. Forests and wildlife seem to be especially vulnerable to well meaning but misguided "experts." Few of these critics have had the opportunity to witness at first hand the results of uncontrolled animal numbers. We have tended to "humanize" animals that are actually wild—witness Bambi, Ricky Raccoon, Smokey Bear, and others.

We hear a lot about "the balance of nature." But man has unbalanced the ecological scene to such a degree that natural controls have become inoperative at many levels. The wolf, the mountain lion and other predatory species have long since been eliminated from much of our country. Any thought of restoring such controls in our urbanizing society is not realistic. Even if they were reestablished, the taking of a deer or other animals by a predatory species utilizing claw and fang can hardly be labeled "humane." The woodsman who has watched a fox run down and kill a rabbit, followed the track of a mink along one of our streams, or

observed the remains of a quail nest after the brood of young has been devoured by a great horned owl knows that natural control forces are often stern and unrelenting.

On the other hand, man's interests have often served as a stimulus to the production of wild animals. Hunters, through their license fees, have financed a major share of conservation efforts and restoration in the field of wildlife, including non-game species and songbirds. This revenue has financed the purchase of public lands in the United States which are actually used only a small part of each year by nimrods. These vast open areas serve the bird watchers, the amateur naturalist, and the camera fan along with hikers and other non-hunting users. The American system of public hunting is in many ways a unique feature of our democracy, one that is highly treasured by millions of Americans.

Fraternization between man and wild creatures can have some surprising results. Years ago I kept under close observation a little spotted male deer fawn that was captured by Civilian Conservation Corps enrollees in Craig County and brought into camp as a pet. While it was growing up on tidbits from the forest, supplied by the 200 camp enrollees, it was indeed a cute pet. As fall came on the young buck sprouted antlers and took on a behavioral change that made him a most undesirable tenant. He was subsequently released from his enclosure and a few days later confronted a farmer who was shocking corn in his field several miles away. After chasing the farmer around the field until he stumbled, the buck, lacking normal fear and respect for man, rammed a sharp pointed antler through the fleshy portion of the farmer's leg. This and other similar experiences have convinced me that man's efforts to fraternize with wild creatures are usually not in the best interests of either party.

The prevailing customs and laws with respect to harvesting wildlife have evolved over a long period, and they are changing in emphasis from hunting for meat to hunting for sport, exercise, and enjoyment of the out of doors.

To summarize on a positive note, I offer the following prescription: Let those who abhor killing animals refrain from doing so. America's vast public hunting grounds, many of which were acquired with receipts from hunting license fees, should be further enhanced by adding scientific management and protection for non-game species so as to benefit non-consumptive users of the resource: those who prefer to observe rather than harvest wildlife.

Let those who love the chase and the hunt prepare themselves to do so with care and skill under rules laid down by qualified wildlife biologists who can read and interpret the evidence as to needs of each species. This is a middle ground that will permit all of us to share in the wonders of the "realm of the wild" far into the future.



Of small difference whether they are cottontail rabbits or Hereford cows in the cosmic scheme of things, all animals can fill man's needs and provide enjoyment in many ways if he has the intelligence to use them wisely.



ROCK CASTLE SMALLMOUTHS

By "BUNNY" HENSHAW
Charlottesville

ROCK Castle on the James certainly sounds impressive, to say the least, but any connoisseur of massive structures would really suffer a let-down when first laying eyes upon it. For Rock Castle is but an abandoned one-room whistle stop on the James River division of the C. & O. Railroad.

However, as we are concerned here with smallmouth bass fishing and its fringe benefits rather than architecture, Rock Castle looms as magnificently as its name implies.

The James flows east to Chesapeake Bay from the Appalachian Mountains through roughly the central part of Virginia. Gathering water along its way from such intriguing sounding rivers as the Cowpasture, Bullpasture, Calfpasture and Buffalo, it has attained a width of some hundred-plus yards by the time it reaches Rock Castle. Here, less than an hour's drive above Richmond, begins a stretch of several miles of water apparently designed by the Creator especially for smallmouth bass. Boulder strewn and jeweled with many small, willow-festooned islands, it will quicken the pulse of any fisherman. Gently swirling pockets, long deep eddies, tempting pools below stone ledges, and fast flowing water over a rock-studded bottom really make it tough to decide where to start fishing. Gigantic cottonwoods and sycamores line the banks to appropriately frame this masterpiece of nature.

It goes without saying that when we lucked into getting permission from a landowner in that area to hack out a campsite on his riverbank, we took immediate advantage of it.

The first step was brushing out a clearing under some low trees and making an access to the river for us and our canoes. Then we hauled in an old refrigerator and a few large spools, that had once held heavy electric cable, to serve as tables, thus completing as slick a riverbank campsite as you could ask for, which we have shared with the kids from the word "Go."

It has been proven time and again that once the sprouts get a taste of nature's wondrous charms, they

are well on their way from any delinquency. And we wanted the "Old Folks" to be just as much a part of the whole as the trees, the tents, the river and all the rest. There isn't much space for a generation gap in the glow of a campfire or between the bow and stern of a canoe. None of the kids were ever taken along as a favor but rather because they were part of a close-knit group which knew no age barriers. They learned fast and it took but a few trips to have them anxious to demonstrate their abilities, even if it didn't go beyond bringing in wood for the campfire. So it went, and almost before we knew it they were old enough and had become self sufficient to the extent that they were organizing their own trips, but they never failed to cut in any of the old folks who could get away.

What with lining up a group, planning ahead, catching bait, and the thousand and one other things that go with camping and general outdoor living, there was little room or impulse left in their youthful minds for plotting rascality. But let's get on with the fishing . . .

Madtoms, those bantam catfish, are the choice bait for this part of the James. The fish are man-sized and they like a worthwhile bait. Creek minnows, spring lizards, soft-shell crawfish, or night crawlers will also take their share of bass from that water. But I'll go along with the majority and swear by the madtoms. One of these boys on the end of a nine-foot fly rod heads my list for downright fishing pleasure.

The perch go for garden and catalpa worms, mainly, and the cats go for 'most anything but lean pretty much in favor of fresh chicken liver (don't use frozen liver; it gets mealy when defrosted and won't stay on the hook). The standard spinners, plugs, or plastic worms are OK for the artificial-bait man. However, I'm afraid our crew may be on the lazy side, preferring to leave the work up to the bait. The labor-saving angle isn't the only attractive feature of fishing with a "tom." It's a pretty satisfactory hot-weather arrangement to lounge around in gently flowing water up to your waist while a three- or four-inch tom is working at his trade in a downstream pool.

The thrill of that "run" when a bass latches onto your bait and takes off for parts remote is hard to beat. And don't suffer under the illusion that there isn't a knack to taking fish by this method. The temptation to lay back on your pole while the bass is running must be overcome. You've got to "give him his head" until he stops to turn that tom around in his mouth. Up to now he has had him by the tail, and as the tom is hooked through the lips all you would get for your trouble would be a skinned-up and probably deceased bait. So you must wait for him to stop running and sweat out the interim while he is rearranging his dinner in his mouth. This is done to the accompaniment of a lot of twitching of your line and jangling of your nerves. And now comes the art of tom fishing.

When he starts off again it generally means that the tom has been arranged mouthwise in a satisfactory manner, and the bass is headed for some secret hide-out to swallow him at leisure. If you've ever paid any attention to watching a cat catch a mouse or bird, you'll have noticed that the first thing he does is to light out from the scene of success. Possibly this is a carryover from bygone years when some other predator was lying in wait to hijack the meal; anyway, that's what they do and so does the bass. I've watched the performance a few times myself when the water was clear, and I happened to be in the right spot at the right time. So when the bass starts off this second time, he is sort of complacent and thinks he has got the deal licked; and now you play your ace.

You must, with a very delicate touch, put just enough resistance in the line to make the bass think that the tom is about to slip away from him, but not enough to arouse his suspicion and have him spit it out. (Remember, that fish didn't get as big as you hope he is by being dumb.) The instant when you feel the bass really chomp down on that tom and slide his feet, you hit him. If everything has been timed just right, the hook will be set and you will have yourself a handful of awfully provoked fish. And he doesn't hesitate to let you know it. I've seen fifteen inchers look as big as the blade on a canoe paddle when they would leap up out of the water with their tail and fins all spread out and the sweat flying. I reckon it's sweat; it looks like it anyway.

Operating out of a fixed camp is almost a must if you really want to get to know this section of the James. Float fishing is, of course, a grand deal, but you are on the move too much to familiarize yourself with any particular stretch of water. Holes at the mouths of spring branches which dump cool water into the river and pay off so well in hot weather can be spotted from a canoe. But it takes "wet wading" to locate the spots where spring water is emerging in the river bed itself. You've got to feel that change in water temperature as you wade along; you can't see it while drifting down-

The campsite at Rock Castle. Pop-tents provide instant private bedrooms.



stream. Knowing where these places are has a lot to do with some people being so much "luckier" than others when it comes to putting fish on the stringer.

Many hours spent in various types of craft have convinced us that canoes are, by far, the most desirable for prowling this type of water. Cradled between a pair of pontoons and powered with an air motor or conventional outboard, equipped with a prop-guard, they have the stability of a raft and the grace of a swan: truly a fisherman's dreamboat.

Naturally we don't always enjoy a big catch at Rock Castle, but we seldom spend a weekend there without netting at least four or five bass that will run over three pounds. If we catch the river muddy, the cats are always there to fish for and it's a beautiful place to be anyway.

The Westview public access area just upstream from Rock Castle is maintained by the State Game Commission for the benefit of those who wish to take advantage of it. So why not round up some kids and give it a whirl? It's there for the asking, and it might save some broken hearts. But go yourself; don't leave it up to some other guy to become a buddy of your son or daughter.

If you are a visitor to our state, a three day non-resident fishing license can be had for a dollar and a half. And you can return home having enjoyed a Virginia attraction that even the tourist guides themselves seem to be unaware of.

There is no age barrier here: just a group of fishermen taking a little time out on a sandbar.





Game Commission photos by Kesteloo

STATE Game Departments (called Game and Fish or Conservation Departments in most states) were brought into being late in the last century and early in this century by groups of concerned sportsmen. They wanted to do something to stop market hunting and the excesses of game hogs. They wanted to do something to check the startling decline of wild game populations. By the 1890's the bison was virtually gone, the passenger pigeon was near extinction, and the pronghorn antelope appeared on the way out. In all the better streams, particularly in the East, fishing was nothing like the "good old days."

So hunters and fishermen banded in clubs and associations and got state legislatures to pass laws setting closed seasons and bag limits; and to establish hunting and fishing licenses to raise money to hire game wardens to enforce the laws.

Those pioneering steps in wildlife conservation occurred in an era when most American families counted on game on the table as a nearly regular part of the family diet. The American people were not yet far from the Frontier.

They were, in fact, in the 1890's and early 1900's, still on the Frontier in many parts of the Midwest and in great areas of the West. Most families—father, mother and children—had one or more hunters and anglers. In many families the hunters were Pa and all the boys, and everybody went fishing, including Ma and the girls. To the extent they could be persuaded to support conservation laws, the hunters and anglers were potentially a powerful political force.

But today things are different in over-populated, urbanized and mechanized America, where even many farm families no longer know how to cure a ham or cut up a frying chicken, much less how to clean wild game.

Reprinted from Winter 1973 issue of *Washington Wildlife*, official publication of the Department of Game, Olympia, Washington.

WILDLIFE MANAGEMENT AND ITS NON-HUNTING CLIENTELE

By CHARLES CALLISON

Executive Vice President, National Audubon Society

According to the latest survey figures released by the U.S. Fish and Wildlife Service, fewer than 25 percent of Americans over 12 years of age went hunting or fishing in 1970. In the large cities only 13.3 percent engaged in either sport. The percentage for small cities and suburbs was 21, and for town and rural areas, 28.5 percent.

While the population climbed, the numbers of licensed hunters in the U.S.A. remained almost constant from 1969 to 1970—at about 14 million—although the number of fishermen increased by about one-third, from 25 million to 33 million. Haven't you noticed the streams, lakes and coastal waters becoming more crowded with boats and tangled tackle?

These figures make the point that the hunters and fishermen who support the state wildlife programs with their license fees and, when necessary, their votes, are now a diminishing minority. Particularly the hunters.

But count all of the people who are interested in wildlife for non-consumptive kinds of recreation and add them to sport hunters and anglers, and you have a solid majority. Take bird watchers, for example. No one has ever come up with a good estimate of the number of bird watchers, although a few years ago a federal study indicated there are at least as many active birders as there are licensed hunters. The problem is how to define a birder for purposes of counting them. Do you count only those who go afield with binoculars to build a trip list or a life list? Or do you include all of those less intense watchers who enjoy the birds at the back-yard feeder and who enjoy them casually, but really, while camping, hiking, on trips to the beach, or other outings?

Then add to the ranks of real and potential wildlife advocates all of the nature photographers and everyone else who thrills to the sight of a deer or an eagle or a flight of wild waterfowl when in the out-of-doors. You've got about everybody who ever gets into the out-of-doors.

The National Audubon Society insists that the whole public has a stake in the healthful functioning of natural ecosystems. The conservation of wildlife and of wildlife habitats is essential to such functioning. Therefore every citizen should support the wildlife programs of federal and state agencies. His own health and welfare depends upon the ecosystem.

But by law and tradition and habit of mind, most state game departments have remained locked-in to the game species and to the hunter and fisherman (a diminishing minority) as their sole clientele. All the while the task of maintaining wildlife populations, against all the pressures of human population and development and pollution, becomes increasingly difficult and costly.

The Game Departments need help. The sportsmen need help. And that help is at hand if you set about systematically to bring it into the fold.

How do you recruit the non-hunter? In the long range, and as quickly as possible, the state game departments have got to broaden and expand their programs to include active attention to the non-game species. The non-hunting wildlife enthusiast is interested in the whole of nature, including the animals you call game but also the non-game, and there are far more of the latter than the former. But this takes money, more money than hunting and fishing licenses will ever yield or should yield.

You can't really get into research and management of non-game wildlife on the scale it deserves without new funds. It isn't fair to go to the sportsman for funds for this purpose. No one has yet figured out how to collect license fees from all the people who enjoy looking at birds without killing them, or wild flowers without picking them, especially when such enjoyment may be merely incidental to other outdoor pursuits. How do you license a farmer who benefits from the mousing habits of hawks and owls? Or the skin-diver who communes silently and pleasantly with underwater life without capturing a single minnow?

But the whole public does indeed benefit from wildlife conservation, and the whole public should contribute. This can be done through general revenue appro-

priations (a precedent now well established in New York although not to scale) or through special taxes, as Missouri is now proposing to do through a one-cent levy on soft drinks.

It is never easy to persuade legislators or the public to vote new funds, but it can be done if hunters and non-hunters combine forces. And in such combination we can accomplish many other things.

Daniel A. Poole, president of the Wildlife Management Institute, recently wrote a long letter to the Assistant Secretary of the Interior for Fish, Wildlife

and Parks. Mr. Poole was, in fact, commenting on some conclusions reached by the Department from the 1970 survey of hunting and fishing mentioned earlier.

"In our view," wrote Mr. Poole, "the time is at hand for the non-hunter and non-angler to begin to match his 'non-consumptive' demands for fish and wildlife and their habitat with his money."

I couldn't agree more.

Mr. Poole went on to list several areas of downright neglect and even abuse of wildlife resources that federal and state agencies should and could correct—given purpose and funds. Some examples:

The National Forests. "Appropriations for . . . habitat management are inadequate, and fish and wildlife receive little consideration in . . . other programs of the U.S. Forest Service."

The Public Domain. "The fish and wildlife potential of The Bureau of Land Management lands is immense, but ignored."

National Wildlife Refuges, where the program is "barely afloat." "It lacks public identity," Mr. Poole charged, "and has little obvious in-house support."

Federal Farm Programs. These often do outright damage to wildlife resources at taxpayer expense when there are, instead, enormous opportunities to benefit the public that pays the bill.

Private Timberlands. In most states there is little service to many owners of small private holdings who would like to use their land for wildlife, recreational and esthetic purposes, not for commodity production.

By combining their numbers and political influence the hunters and non-hunters together can provide the purpose and they can secure the funds for all of the task outlined by Mr. Poole. And the whole public will benefit by virtue of a better environment.





Edited by MEL WHITE



Game Commission photo by Satterlee

Recently elected Game Commission Chairman Allan A. Hoffman of Danville, right, greets the newest Commission member, Dr. James R. Knight, Jr., of Warsaw, who represents Virginia's First Congressional District.

Dr. Allan Hoffman Named Commission Chairman

Doctor Allan A. Hoffman of Danville was elected Chairman of the ten-member Commission of Game and Inland Fisheries during a regular meeting of that body in their Richmond office July 13, 1973. He succeeded Second District Commissioner Edward E. Edgar of Norfolk, who had served as Chairman since July 1972. Elected to a second term as Vice Chairman was G. Richard Thompson of Marshall, Virginia. Mr. Thompson, who has been a member of the Commission since

1965, is a prominent Fauquier County sportsman, farmer, and is president of the Marshall National Bank.

Dr. Hoffman has been Fifth Congressional District representative on the Game Commission since his appointment by Governor Holton in December of 1970. A graduate of Princeton University and of Harvard Medical School, Doctor Hoffman has been in private medical practice in Danville, Virginia, since 1967, specializing in urology. He is also attending urologist

at the Danville Memorial Hospital and at the Annie Penn Memorial Hospital in Reidsville, North Carolina. Additionally, Dr. Hoffman chairs the twelve-member Advisory Committee on Fisheries Science at V.P.I. & S.U. and is a member of the American Fisheries Society and the Wildlife Society.

Home Gun Safety Folder

The Game Commission has a limited number of a pocket-size booklet entitled "Firearms Safety in the Home" for distribution to individuals and groups interested in promoting this aspect of safe gun use. The pamphlet, which is printed by the National Shooting Sports Foundation, covers all aspects of storing and handling guns, ammunition, and reloading components in and around the home.

Rare Catch



Game Commission photo by Gillam

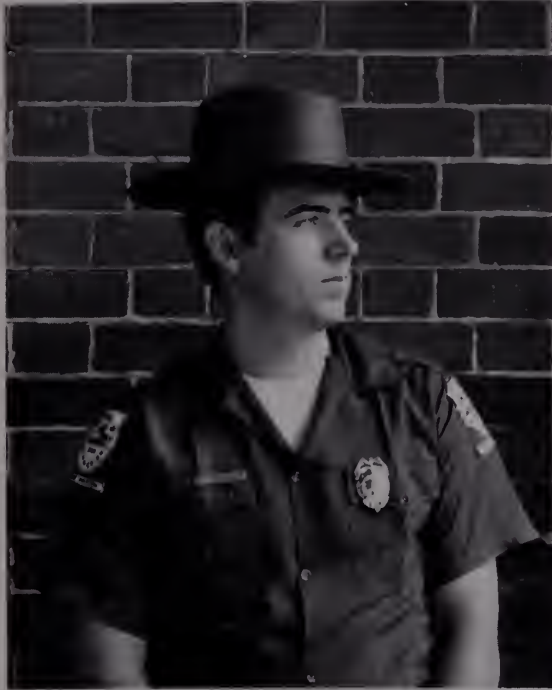
No, it isn't a world record bluegill or crappie Fisheries Field Coordinator Ray Corning is holding, but it caused quite a stir when it was weighed in at Red Ford & Son sporting goods on Richmond's south side. The huge fish was identified as a tripletail, a solitary saltwater species that occasionally strays into Virginia waters during the summer months. Angler James V. Baum of Richmond hooked this one in early August near the Hopewell bridge.

VIRGINIA WILDLIFE

Know Your WARDENS

Text and Photos by F. N. SATTERLEE
Information Officer

WILLIAM L. PARKER, JR.
Game Warden, Caroline County Area



William Parker is a Richmonder by birth but a Middlesex County native by way of residency. He grew up in the rural area thereabouts learning about hunting and fishing from his father and grandfather. Additionally, he was profoundly influenced by the tales his grandmother used to tell him about waterfowl and wildlife, and it sharpened his desire to eventually be part of an outdoor life.

While still in Jr. High, his father gave him his first gun and trained him in its proper use.

Although he enjoyed and participated in high school sports, he gave up basketball in order to be able to go hunting after school.

Following graduation from Middlesex High School he attended the University of Florida's Forest Ranger School near Lake City. After completing the requirements for his certificate at that institution, he worked for a time in forestry near Waverly, Virginia.

He later worked for a chemical company but, disliking inside work, applied for employment with the Game Commission. He was accepted as a warden in the spring of 1973 and was assigned to duty in the Caroline County area.

Mr. Parker likes working outside and meeting sportsmen in the field and feels as though he is contributing something to the world rather than just putting time in on a job.

He, his wife, the former Joyce Jenkins from King George County, and their three-year-old son live in Bowling Green, Virginia.

JOHN W. CRICKENBERGER
*Area Leader Warden
George Washington District*

Crozet, Virginia, in Albemarle County, was the birthplace of John Crickenberger and it was in this village of about 400 people that he grew up. His summers were spent on his grandfather's farm near Earlys ville, Virginia. There were no tractors on the 600-acre place, and as a consequence John became intimately familiar with horsepower. He also became acquainted with and learned to appreciate the outdoors, wildlife, and hunting and fishing. He recalls an early contact with wildlife and with the Game Commission when, during the mid-1930's, his aunts raised quail for that organization.

Following graduation from Crozet High he worked for a time in the construction field, then entered the U.S. Army. He spent three years in the service, two of them in Europe with the 1648th Ordinance Company, and was awarded five Battle Stars for action in Italy, France, and Germany.

Returning from the service he spent thirteen years as an automotive mechanic in Orange, Virginia, and in March of 1958 was accepted as a game warden and assigned to Orange County. In November of 1966 he was promoted to his present position of Area Leader.

For John, the most rewarding aspect of his work is being able to work with people and wildlife in the outdoors. He also feels rewarded by the fact that he and the other wardens are constantly striving to protect our wildlife heritage . . . and making it work.

He and his wife, the former Vivian Piercy from Orange County, have two children and make their home just west of Orange, on an eight-acre place.





Edited by ANN PILCHER

4-H's Through the Year

By
(Mrs.) SUZANNE H. PERRY
*VPI&SU Extension Agent
Chatham*



Buzz Harmon and Sherrie Keatts arranged a special exhibit in Chatham during National Wildlife Week to acquaint the public with the more common species of wildlife in Pittsylvania County. National Wildlife Federation posters with the theme "Discover Wildlife—It's Too Good to Miss" were used in the display.



Approximately 75 4-H Club members constructed bluebird houses in the three workshops held in different areas of the county with the assistance of Mr. C. B. Phillips, Extension Agent.



LIKE most young people, 4-H'ers in Pittsylvania County like the outdoors and the wildlife they associate with it. They expanded their knowledge of the subject during the 1972-73 school year through a wildlife project which included workshop participation and National Wildlife Week observance. A massive hike along Hiawatha Nature Trail on White Oak Mountain culminated their activities.

In the workshops, approximately 75 4-H'ers constructed bluebird houses with the assistance of agents of the Cooperative Extension Service of the Virginia Polytechnic Institute and State University (Virginia's land-grant university) in cooperation with the U. S. Department of Agriculture and local governments. Ideas for improvised bird feeders were offered, and a special recipe for bird feed was given to and used by 4-H Club members during the winter. The inexpensive recipe calls for a mixture of these ingredients:

- 2 1/4 cups corn meal
- 1/3 cup peanut butter
- 1/3 cup bacon grease or solid shortening
- 1/2 cup bird feed

J. L. Tramel, local game warden, presented the film "Operations Wildlife," and games designed to acquaint the groups with wildlife in Pittsylvania County were played.

In observance of National Wildlife Week, March 18-24, National Wildlife Federation posters were displayed by members in their various schools, and teen-age members who attended the State Conservation Camp in 1972 erected a special exhibit in Chatham depicting common types of wildlife in the county and in Virginia.

The Nature Trail hike was accomplished with the cooperation of several sources. Through school authorities, buses were secured to transport over 400 4-H'ers to the site. William T. Hathaway, Science Specialist for the



Mrs. Suzanne Peery, Extension Agent, and Mr. William Hathaway, Science Specialist for the Pittsylvania Schools, coordinated plans for the massive hike. 4-H'er Jack Holland, Jr., holds one of the bird houses erected at points along the trail.

school system, briefed the group at the beginning of the hike on various aspects of the trail. A number of bird houses constructed by the members were erected at points along the trail, and approximately 100 autumn olive shrubs were planted around the pond area to provide for wildlife habitat improvement. The seedlings will mature to large bushes 10 to 15 feet high and produce copious amounts of nutritious red berries eaten by most wildlife; they also offer some cover for wildlife. The plants were provided by the Virginia Division of Forestry. County Forester Warren Pinnick and U.S. Gypsum Company Forester G. W. Peery, Jr., assisted the boys and girls with the plantings. Each participant was also given a seedling to take home and plant.

Assisting with the hike, in addition to Mr. Hathaway, were Extension Agents Wayne Brown, Jack Holland, C. B. Phillips, and Suzanne Peery. Additional help came from Jim Peery, Forestry and Wildlife Student, VPI & SU; and from several teachers and parents.

The Hiawatha Nature Trail was developed through the cooperation of the Virginia Commission of Game and Inland Fisheries and the Pittsylvania County School Board. It is located approximately six miles east of Chatham and is part of 2,714 acres known as the "White Oak Mountain Wildlife Management Area." Approximately 100 acres of this track were leased to the Pittsylvania County School Board for the purpose of providing an outdoor laboratory for the study of nature, conservation and science by the school pupils and citizens of the area. The School Board and the Game Commission have expressed the hope that large numbers of pupils and adults in Pittsylvania County and surrounding counties and cities will take advantage of the educational and recreational opportunities provided by this facility.



The trail is designed as a self-guided tour, but an attractive bulletin has been prepared which describes a number of interesting points on the trail designated by numbered posts. The trail is approximately one mile in length and involves a leisurely one-hour hike.

Over 400 4-H'ers participated in the hike through the Hiawatha Nature Trail on White Oak Mountain on March 24. More than 3,000 members will be enrolled in Wildlife Projects next year.



Approximately 100 autumn olive shrubs were planted in the pond area of the Nature Trail by 4-H'ers with the assistance of foresters Warren Pinnick and George Peery, Jr.





Edited by JIM KERRICK

Insurance Costs Down; Boatmen Good Risks

There was a time when the pleasure boat owner either paid exorbitant rates to insure his craft or trusted in his luck. No more.

The insurance industry is actively competing for the boatman's premiums with attractive, tailored policies to fit a variety of needs. Only in the past decade have insurance companies cared about boatmen other than the large yacht owner. It was a slow start. No actuarial data was available on the subject of smaller boats; premiums were higher than they should have been and were not uniform across the country, regardless of location, sea conditions prevailing, or length of season. Some policies contained so many restrictions that they amounted to practically no protection at all.

In time, companies discovered that most boatmen wanted coverage and that losses, on average, were considerably less than had been thought.

An average boat policy today is an "all risk" policy which provides protection from almost every conceivable hazard, including fire, theft, lightning, explosion, windstorm, sinking and stranding, collision and loss overboard. Coverage extends to all year, afloat, ashore, or in tow. Policies can include liability and bodily injury, including medical payments. Many homeowners' policies can be extended to cover a boat, and automobile insurance can cover a trailer.

Some years ago, the cost for an average policy averaged four to five percent of the market value of the insured boat. On a \$1,500 boat, for example, all-risk coverage could run in the neighborhood of \$75.

Today, though, after some years' experience and fewer losses than anticipated, rates have been cut in half, or about two and one-half percent of boat

value, according to the Outboard Boating Club of America. It would seem that as the years go by and as the insurance industry discovers that boating is not only big business but good business, too, premiums should continue to decline.

And for the boatmen, insurance is a must.

Stretch the Use of Your Boat by Choosing Right Equipment

You can get more pleasure and all-round use from your boat when you outfit it with the proper equipment. Equipment is usually defined in terms of that which is legally required to be aboard and that which is recommended in the interest of greater safety.

If you're the owner of an outboard boat, your equipment needs will vary according to the size of your craft. For instance, the skipper of a 22-foot outboard fishing boat will probably carry a wider range of gear than the owner of a 12-foot dinghy or 14-foot runabout.

One item imperative for all boats is a lifesaving device for each person aboard. These most often take the form of jackets, vests or buoyant cushions filled with flotation material. Make certain these are Coast Guard approved. Those that are carry a small label to this effect.

An anchor, line and fenders are among the basics. Select an anchor that would best fit the needs of the boat you have. Many skippers choose about 100 feet of anchor line, either Manila or nylon. Added to that are bow and stern lines. Their length will vary according to the skipper's preference. In coastal areas, with a rise and fall of tide, longer lines are usually required than those used for lake or river boating.

COMPASS IS HANDY

A compass, either hand held or mounted as a permanent installation, is

a valuable aid for the owner of a small craft. When read correctly, it can make a considerable difference in determining one's position, particularly in periods of poor visibility.

The prudent skipper will do well to include the following aboard his boat: a fire extinguisher, bilge pump, a set of fenders, a paddle, a horn, a first aid kit, a spare prop and a set of basic tools. Most outboard owners' manuals provide basic advice on trouble shooting a pesky engine. Frequently, the bother can be traced to a minor irritant, readily set to rights by the skipper.

ELECTRONICS

Fish-locators, depth finders, and ship-to-shore radios are among the wide range of electronic equipment on the market today. Many of these add new dimensions to the use of small craft. When all is said and done, the choice is that of the individual skipper. Sophisticated gadgets, like caviar, are said to be an acquired taste. Many of them, like caviar, may depend upon the current state of your bank account.

Three "C's" of Boating

To acquire the requisites for a lifetime of boating enjoyment, learn the three "C's" of boating—courtesy, common sense and care.

There are a number of general rules which fall under the heading of courtesy. These should become second nature. For instance, slow down when passing another boat and stay well clear. This is especially true if the other boat is smaller, or anchored, or fishing. One thing to remember about fishermen: Often a fishing boat will be trolling lines from the stern. You should avoid any possibility of cutting across those lines or breaking off a fish that the other boat may be fighting.

Bird of the Month:

The Bobolink

By JOHN W. TAYLOR
Edgewater, Maryland



THE bobolink that Virginians know is a different bird from the bobolink so familiar to New Englanders. It looks different, sounds and acts differently. It is even known by a different name.

A partial answer to this Jekyll and Hyde mystery lies in the moulting sequences of the male bird. The summer plumage, when the birds are on their northern breeding grounds, is a harlequin-like pattern of black, ochre and white. In late July, before beginning the journey south, these bright feathers are exchanged for a brown, sparrow-like costume like that of the female. So in August and September, when they are moving through the southern states (on their way to Argentina), they are hardly recognizable by those who knew them on their nesting meadows.

With the change in attire, the bobolink assumes a new manner of life, even another personality. The rollicking, merry songster of June becomes quiet, sedate. The throat which a few weeks ago was bursting with melody is now stilled, mute save for a barely audible "chink."

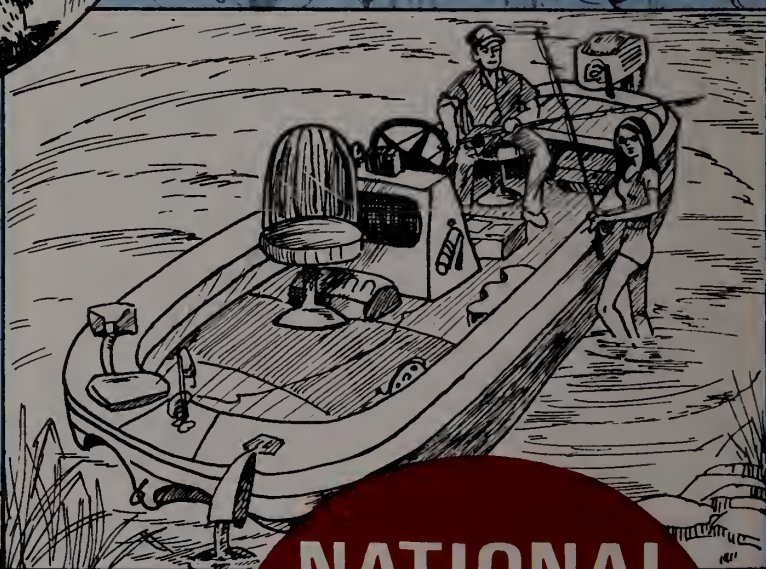
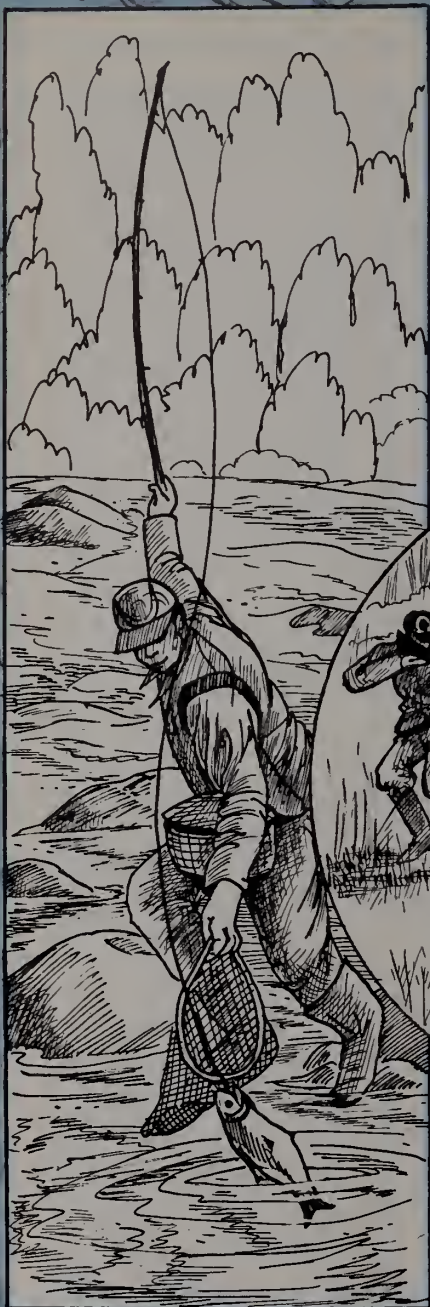
Completing the transformation, bobolinks now forsake the fields and agricultural clearings and become marsh birds. As they move south, they congregate in the stands of wild rice that border the Delaware, the Potomac, and the many tributaries of the Chesapeake

Bay. The grain, just ripening, is ready for harvest, and the bobolink hordes fatten up in preparation for the long hop across the Gulf of Mexico. They become so fat that they were once known as "butter-birds."

This was one of the names used by those who hunted them to sell in the market. A tasty morsel when on a rice diet, bobolinks were once a featured item on the menus of the finest restaurants in Baltimore, Washington and Philadelphia. These menus listed them as "reed birds" or "rice birds." Few who dined on them knew they were eating bobolinks.

After running the gauntlet formed by the market hunters, the harried birds faced the guns of the Carolina rice plantations. Bobolinks liked cultivated rice even better than they did the wild variety, and could inflict severe damage on the just ripened crop. Many plantation owners stationed crews of men to blast away all day at the offending birds.

Such heavy autumnal shooting greatly reduced their numbers, and bobolinks have never recovered their former abundance. Rice has long been abandoned as a crop in the Carolinas, and market hunting has been outlawed since 1913. But the constant and widespread destruction of wetlands continues, and at an ever accelerating pace.



**NATIONAL
HUNTING &
FISHING DAY**

September 22, 1973